

CLAIMS

What is claimed is:

- 5 1. A method comprising:
modifying a property of a nozzle of a printing head of a three-dimensional model
printer in relation to a property of a portion of material produced by said nozzle.
2. The method of claim 1, comprising measuring a weight of the material produced
10 by said nozzle.
3. The method of claim 1, comprising measuring a volume of the material produced
by said nozzle.
- 15 4. The method of any of claims 1-3, wherein modifying the property comprises
modifying a voltage of the nozzle.
5. The method of any of claims 1-3, wherein modifying the property comprises
modifying a voltage of the printing head.
20
6. The method of any of the preceding claims, comprising forming a measuring block
of said material.
7. The method of claim 6, comprising measuring a property of the measuring block.
25
8. The method of claim 7, wherein measuring the property of the measuring block
comprises measuring the height of the measuring block.
9. The method of claim 7, wherein measuring the property of the measuring block
comprises measuring the weight of the measuring block.
30
10. A method comprising:

evaluating a nozzle of a printing head of a three-dimensional model printer in relation to a property of a portion of a material produced by said nozzle.

11. The method of claim 10, comprising forming a test pattern of said material.

5

12. The method of claim 11, comprising acquiring an image of said test pattern.

13. The method of claim 12, wherein evaluating the nozzle comprises modifying a property of the nozzle in relation to a result of an analysis of the image of said test pattern.

10

14. A method comprising:

detecting one or more malfunctioning nozzles of a printing head of a three-dimensional model printer.

15

15. The method of claim 14, comprising treating said one or more malfunctioning nozzles.

16. The method of claim 14, comprising, if a number of said one or more malfunctioning nozzles is greater than a pre-defined value, providing notification of a need to replace said printing head.

20

17. The method of claim 14, comprising:

analyzing a scatter pattern of said one or more malfunctioning nozzles; and

in relation to a result of the analysis, providing notification of a need to replace said printing head.

25

18. A method comprising:

dispensing interface material from a three-dimensional model printer; and

determining a property of the dispensed interface material.

30

19. The method of claim 18, comprising determining a weight of a dispensed interface material.
- 5 20. The method of claim 18, comprising determining a volume of a dispensed interface material.
21. The method of claim 18, comprising determining a height of a dispensed interface material.
- 10 22. An apparatus comprising:
a reservoir to store an interface material of a three-dimensional model printer; and
a sensor to determine a property of a dispensed portion of the interface material.
23. The apparatus of claim 22, wherein the property is a volume.
- 15 24. The apparatus of claim 22, wherein the property is a drop-volume.
25. A three-dimensional model printer comprising:
a printing head to dispense interface material; and
20 a sensor to determine a property of the dispensed interface material.
26. The three-dimensional model printer of claim 25, wherein the sensor comprises a sensor to detect a weight of the dispensed interface material.
- 25 27. The three-dimensional model printer of claim 25, wherein the sensor comprises a sensor to detect a volume of the dispensed interface material.
28. The three-dimensional model printer of claim 25, wherein the sensor comprises a sensor to detect a height of the dispensed interface material.
- 30 29. A calibration system comprising:

a container to receive deposited interface material from a nozzle of a printing head of a three-dimensional model printer; and
a sensor to determine the weight of said deposited interface material.

- 5 30. The calibration system of claim 29, comprising a controller to modify a property of said nozzle in relation to said weight.
31. The calibration system of claim 29, wherein said property comprises a voltage of said nozzle.
- 10 32. An apparatus comprising:
a controller to modify a property of a nozzle of a printing head of a three-dimensional model printer in relation to a property of a portion of material produced by said nozzle.
- 15 33. The apparatus of claim 32, wherein the property of the nozzle comprises a voltage of the nozzle.
- 20 34. The apparatus of claim any of claims 32-33, comprising a sensor to measure a property of a measuring block produced by said three-dimensional model printer.
35. The apparatus of claim 34, wherein the property of said measuring block comprises a weight of said measuring block.
- 25 36. The apparatus of claim 34, wherein the property of said measuring block comprises a volume of said measuring block.
37. The apparatus of claim 32, comprising a sensor to measure a height of a measuring block produced by said three-dimensional model printer.
- 30 38. An apparatus comprising:

a controller to evaluate a printing head of a three-dimensional model printer in relation to a property of a portion of material produced by said nozzle.

5 39. The apparatus of claim 38, comprising an imager to acquire an image of a test pattern formed by said printing head.

40. The apparatus of claim 39, wherein the controller is to modify a property of the nozzle in relation to a result of an analysis of the image of said test pattern.

10 41. The apparatus of claim 40, wherein said result comprises a number of malfunctioning nozzles in said printing head.

42. The apparatus of claim 40, wherein said result comprises a scatter pattern of malfunctioning nozzles in said printing head.

15